



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

ONE BURLINGTON STREET
ATLANTA, GEORGIA 30334

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MEMORANDUM

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DATE: DEC 10 1991

SUBJECT: Comments on Olin Chemicals Source Evaluation Technical Memorandum Dated November 1991.

FROM: Doug McCurry, Chief
Waste Engineering Section 

TO: Ken Lucas, RPM
South Superfund Remedial Branch

The following are comments on Olin Chemical's Source Evaluation Technical Memorandum dated November 1991. If you have any questions, please contact Joanne Benante of my staff on extension 3433.

Site Background and Setting

pg 6 Site Background and Setting
 2.1.1 Operable Unit 1

The list of Solid Waste Management Units (SWMUS) which is consistent with the Administrative Order on Consent and associated workplan, is currently inconsistent with the results from the RCRA Facility Assessment dated August 19, 1991. Attachment A is a summary of the RFA results for the 17 SWMUS listed on page 6 of the Source Evaluation Technical Memorandum. These SWMUS are highlighted in orange.

The list of SWMUS requiring some further action, as a result of the RFA are also summarized in Attachment A and highlighted or checked in pink. At some point I suggest we include the investigation of these additional SWMUS into the RI process. The point at which we require further investigation for the 17 SWMUS previously identified may be the time to require Olin to perform further investigations on the additional SWMUS identified that need further action.

pg 24

3.4 Inactive Nonhazardous Units
Ask ponds

Olin states that "[the] boiler ash has been analyzed for metals by the Toxicity Characteristic Leaching Procedure (TCLP). The TCLP tests indicated that the metal concentrations were below the regulatory limits. Based on these analyses, Olin obtained approval from ADEM in a letter dated March 12, 1991 to use the ash as fill material at the Hexachlorobenzene Spoils Area."

This is not the policy of the RCRA Branch [See 40 CFR 257] to allow contaminated materials under Subtitle D, to be used as fill material. It seems that the original problem at the Hexachlorobenzene Spoils Area, i.e. the removal, was because Olin had used in years past hexachlorobenzene blocks as erosion control. Using the ash material as fill material may be just as unsafe.

The TCLP procedure is one used on waste streams to determine whether or not the waste should be handled as a hazardous waste. Waste that is determined by TCLP to be hazardous is subject to Subtitle C regulations and should be disposed in a hazardous waste landfill. Waste that is determined by TCLP to be nonhazardous must be handled as a solid waste and therefore be disposed in a solid waste landfill.

The use of this material as fill may pose a threat to human health and the environment. This area should be tested by a total constituent analysis to determine if it currently poses a threat.

4.2. Isoconcentration Maps

The isoconcentration maps in Appendix D and Appendix E are very difficult to interpret. A facility overlay should be incorporated into the isoconcentration maps to determine the estimated extent of contaminants as it relates to the facility boundary, corrective action well, SWMUs, etc.

Table 3

A determination should be made as to the reliability of the current wells because they will be used for future sampling

Figures 8-29 Time vs. Concentration Curves

The time vs. concentration analysis doesn't seem all that conclusive, nor helpful. the overall trend of the groundwater contaminant flow is unclear from this analysis. The adequacy of the current groundwater extraction system is inconclusive yet it seems that this system is not sufficiently capturing the contaminant plume(s).

1-1
OLIM CHL CORPORATION
EXECUTIVE SUMMARY TABLE

SWMU/AOC	TYPE OF UNIT	YEARS IN OPERATION	WASTES MANAGED	POLLUTANT MIGRATION PATHWAYS ⁶	EVIDENCE OF RELEASES	EXPOSURE POTENTIAL ¹	RECOMMENDATION			
							NEED FOR INTERIM MEASURES	RFI	NO FURTHER ACTION	FURTHER ASSESSMENT
1 Brine Filter Backwash Pond	RCRA Surface Impoundment	1972 to 1985	Wastewaters including washdown, filter backwash, process water, brine purification mud (K071) and mercury (D009)	A,SW,S,GW,SS	Yes	L			X ³	
2 Weak Brine Pond	RCRA Surface Impoundment	1952 to 1985	Weak post-process brine (K071), and filter backwash containing mercury (D009)	A,SW,S,GW,SS	Yes	L			X ³	
3 Pollution Abatement (PH) Pond	RCRA Surface Impoundment	1976 to 1985	Washdown from process areas, cooling tower blowdown, corrosive wastes (D002) and mercury (D009)	A,SW,S,GW,SS	No	L			X	
4 Lime Ponds (2)	Surface Impoundments	1968 to 1979	Lime slurry containing calcium carbonate and mercury vapors	A,SS S,GW,SW	Yes	L U				X ²
5 Stormwater Pond	RCRA Surface Impoundment	1976 to 1985	Stormwater runoff containing mercury (D009) and other inert solids	A,SW,S,GW,SS	Yes	L			X ³	
6 Inactive Ash Ponds (2)	Surface Impoundments	1976 to 1988	Non-hazardous boiler ash	A,SW,S,GW,SS	No	L			X	
7 Active Ash Pond	Surface Impoundment	1985 to Present	Sludge containing calcium and sodium sulfates, and non-hazardous boiler fly ash	A,SW,S,GW,SS	No	L			X	
8 Diaphragm Cell Brine Pond	Surface Impoundment	1977 to Present	Weak brine solution containing calcium and sodium sulfates	A,SW,S,GW,SS	No	L			X	

¹L designates a low, M designates a moderate, H designates a high, and U designates an Unknown exposure potential; see SWMU description for substantiation

²Confirmatory Sampling is suggested

³Releases from these units are monitored under RCRA Post-Closure, NPDES, UIC, and/or ADEM Air Permits

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0629

-1
OLIN CHEMICAL CORPORATION
EXECUTIVE SUMMARY TABLE

SWMU/AOC	TYPE OF UNIT	YEARS IN OPERATION	WASTES MANAGED	POLLUTANT MIGRATION PATHWAYS ⁶	EVIDENCE OF RELEASES	EXPOSURE POTENTIAL ¹	RECOMMENDATION			
							NEED FOR INTERIM MEASURES	RFI	NO FURTHER ACTION	FURTHER ASSESSMENT
9 Overflow Basin	Surface Impoundment	1977 to Present	Weak brine solution	A, SW, S, GW, SS	No	L			X	
10 Ash Disposal Borrow Pits	Landfills	1982	Dewatered fly ash	A, SW, S, GW, SS	No	L			X	
11 Old Plant (CPC) Landfill	Landfill/ Former Surface Impoundment	1952 to 1977	Acidic wastewaters, general plant debris, pesticides and metals, PCNB (U185), chlorobenzene (U037), dichlorobenzenes (U070 and U071), hexachlorobenzene (U127), and corrosive wastes (D002)	S, GW SS, SW A	Yes	H M L		X		
12 Sanitary Landfills (2)	Landfills	1976 to 1984	Plant trash and debris, paper, cardboard, plastics and possibly asbestos, hexachlorobenzene (U127), and sludges containing mercury (D009)	S, GW A, SS SW	No	M L L-M				X ²
13 Asphalt/Concrete Disposal Area	Land Disposal Area	App. 1982 to Present	Inorganic solid debris, including concrete, piping, plastics, asphalt and other construction materials	A, SS S, GW, SW	No	L U				X ⁴
14 pH Treatment System	Above-Ground Tanks and Surface Impoundment	1976 to Present	Corrosive process wastewaters (D002)	A, SW, S, GW, SS	No	L			X ³	
15 Pump and Treat System	Corrective Action Program	1987 to Present	Ground water containing mercury, organic compounds, chlorides and hazardous ph levels	GW A, SW, S, SS	No	H L		X ⁴		

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SWMU/AOC	TYPE OF UNIT	YEARS IN OPERATION	WASTES MANAGED	POLLUTANT MIGRATION PATHWAYS ⁵	EVIDENCE OF RELEASES	EXPOSURE POTENTIAL ¹	RECOMMENDATION			
							NEED FOR INTERIM MEASURES	RFI	NO FURTHER ACTION	FURTHER ASSESSMENT
16 Former Hydrazine Wastewater Treatment Facility	Treatment Unit	Dec. 1988 to Jan. 1990	Hydrazine wastewaters	A,SW,S,GW,SS	No	L			X	
17 Mercury Waste Pile Storage Pad	RCRA Storage Area	1980 to 1984	Mercury (D009) contaminated bulk and drummed solids	A,SW,S,GW,SS	No	L			X	
18 Mercury Drum Storage Pad	RCRA Drum Storage Area	1980 to 1984	Drummed process wastes contaminated with mercury (D009)	A,SW,S,GW,SS	No	L			X	
19 Chromium Drum Storage Pad	RCRA Drum Storage Area	1980 to 1984	Drummed solid and liquid wastes contaminated with chromium (D007)	A,SW,S,GW,SS	No	L			X	
20 Used Oil Tank and Unloading Pad	Above-Ground Tank and Loading Area	Oct. 1984 to Present	Spent vehicle (motor) oils and equipment lubricating oils	SW,S GW,A,SS	Yes	M L				X ²
21 Recycle Yard	Temporary Storage Area	App. 1989 to Present	Non-hazardous waste products, primarily wood and metal	A,SW,S,GW,SS	No	L			X ⁴	
22 PCB/Hex Storage Building	RCRA Storage Building	1978 to 1984	TSCA regulated PCBs, K085 contaminated solids	A,SW,S,GW,SS	No	L			X	
23 Former Hex Solidification Area	Waste Process Area	1956 to 1977	Molten still bottoms from production of chlorobenzenes (K085)	A,SW,S,GW,SS	No	L			X	
24 Hex Spoil Area	Land Disposal Area	Unknown to 1990	Hexachlorobenzene (K085)	A,SW,S,GS,SS	Yes	L			X	

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OLIN CHEMICAL CORPORATION
EXECUTIVE SUMMARY TABLE

SUMU/AOC	TYPE OF UNIT	YEARS IN OPERATION	WASTES MANAGED	POLLUTANT MIGRATION PATHWAYS ⁶	EVIDENCE OF RELEASES	EXPOSURE POTENTIAL ¹	RECOMMENDATION			
							NEED FOR INTERIM MEASURES	RFI	NO FURTHER ACTION	FURTHER ASSESSMENT
25 Hazardous Waste Drum/Flammable Storage Pad	RCRA Drum Storage Area	1979 to 1985	Ignitable wastes (D001), and possibly acetonitrile (U003), dichlorobenzenes (U070, U071, U072), PCNB (U185) and 1,2,4,5-tetrachlorobenzene (U027)	A,SW,S,GW,SS	No	L			X	
26 Coal Boiler Wastewater Tank	Above-Ground Tank	1977 to Present	Boiler wastewaters	A,SW,S,GW, SS	No	L			X	
27 Hydrazine Scrubber Tanks (2)	Emission Scrubber Units	1988 to Present	Wastewaters which may contain A-50/Hydrazine	A,SW,S,GW,SS	No	L			X	
28 Portable Hydrazine Wastewater Tank	Mobile Wastewater Tank	1991 to Present	Non-hazardous wastewaters containing A-50/Hydrazine	A,SW,S,GW,SS	No	L			X	
29 Hydrazine Wastewater Unloading Area	Surface Unloading Pad	1991 to Present	Wastewaters containing A-50/Hydrazine	SW,S A,GW,SS	No	M L				X ²
30 Hydrazine Stormwater Collection Tank and Sump	Inground Tank and Sump	1988 to Present	Wastewaters containing A-50/Hydrazine	A,SW,S,GW,SS	No	L			X	
31 Asbestos Accumulation Area	Dumpster	1978 to Present	Waste asbestos fibers	A,SW,S,GW,SS	No	L			X	
32 Diaphragm Cell Asbestos Removal Area	Asbestos Removal Area	1977 to Present	Waste asbestos fibers and washwaters	A,SW,S,GW,SS	No	L			X	

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SWMU/AOC	TYPE OF UNIT	YEARS IN OPERATION	WASTES MANAGED	POLLUTANT MIGRATION PATHWAYS ⁵	EVIDENCE OF RELEASES	EXPOSURE POTENTIAL ¹	RECOMMENDATION			
							NEED FOR INTERIM MEASURES	RFI	NO FURTHER ACTION	FURTHER ASSESSMENT
33 Package Boiler	Boiler	Dec. 1976 to Present	Hydrazine wastewaters from the A-50/Hydrazine Blending Process	A,SW,S,GW,SS	No	L			X ³	
34 Former Mercury Recovery Systems	Recovery Unit	Unknown to 1982	Solid wastes contaminated with mercury (D009), cell room floor sweepings, and decomposer packing (mercury butter)	A,SW,S,GW,SS	No	L			X	
35 Old Plant Landfill Drainage Ditch	Drainage Ditch	1952 to Present	Runoff from the Old Plant (CPC) Landfill (SWMU 11) including PCNB (U185), chlorobenzene (U037), dichlorobenzenes (U070 and U071), hexachlorobenzene (U127), and wastes characterized as corrosive (D002).	SW,S,GW A,SS	Yes	M-H L				X ²
36 Former Hex-Lined Drainage Ditches	Drainage Ditches	1952 to 1977	Hex used for erosion control, contaminated runoff from the CPC Plant (AOC A), the Weak Brine Pond (SWMU 2), and the Strong Brine Pond (AOC F)	S SW,GW A,SS	Yes	M-H M L				X ⁴
37 Coal Storage Area Drainage	Drainage Ditches	App. 1951 to Present	Runoff from the coal storage area	S SW,GW A,SS	Yes	M-H M L				X ²

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1-1
OLIN CHEMICAL CORPORATION
EXECUTIVE SUMMARY TABLE

SMMU/AOC	TYPE OF UNIT	YEARS IN OPERATION	WASTES MANAGED	POLLUTANT MIGRATION PATHWAYS ⁵	EVIDENCE OF RELEASES	EXPOSURE POTENTIAL ¹	RECOMMENDATION			
							NEED FOR INTERIM MEASURES	RFI	NO FURTHER ACTION	FURTHER ASSESSMENT
38 Basin	Receiving Waters	1951 to 1974	Wastewaters containing mercury (D009), storm-water runoff possibly containing PCNB (U185), chlorobenzene (U037), dichlorobenzenes (U070 and U071), hexachlorobenzene (U127), and 1,2,4,5-tetrachlorobenzene (U207)	SW,S,GW A,SS	Yes	H L		X		
39 TCAM Hydrolyzer	RCRA Treatment Tank	1979 to 1981	Reactive residue (D003) and corrosive wastes (D002)	A,SW,S,GW,SS	No	L			X	
40 Barge Caustic Soda Spill Sites	Spill Sites	1990 to Present	Caustic wastewaters (D002)	S GW SW A,SS	Yes	M-H M L-M L				X ⁴
41 Air Emission Control Devices	Air Emission Control Devices	1952 to Present	Air emissions from the production of chlorine, caustic soda, PCNB, TCAM and Terrazole	A,SW,S,GW,SS	No	L			X ³	
42 Product Loading/Unloading Areas	Loading/Unloading Areas	App. 1951 to Present	Spills from loading/unloading operations	A,SW,S,GW,SS	No	L			X	
43 Stormwater Drainage System	Drainage Ditches	1951 to Present	Stormwater runoff and treated process wastewaters	A,SW,S,GW,SS	No	L			X ³	
44 Plugged Brine Injection Wells	Injection Wells	1951 to 1988	Weak brine solution contaminated with mercury (D009)	A,SW,S,GW,SS	No	L				X ⁴
45 Caustic Soda Spill Site	Spill Site	1988 to Present	Spilled 12% caustic (sodium hydroxide)	A,SS GW,SW,S	Yes	L U				X ⁴

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OLIN CHEMICAL CORPORATION
EXECUTIVE SUMMARY TABLE

SWMU/AOC	TYPE OF UNIT	YEARS IN OPERATION	WASTES MANAGED	POLLUTANT MIGRATION PATHWAYS ⁵	EVIDENCE OF RELEASES	EXPOSURE POTENTIAL ¹	RECOMMENDATION			
							NEED FOR INTERIM MEASURES	RFI	NO FURTHER ACTION	FURTHER ASSESSMENT
46 Diaphragm Cell Trenches and Sump	Trenches and Sump	1977 to Present	Filtered washwaters from the Diaphragm Cell Asbestos Removal Area (SWMU 32) which may contain asbestos fibers.	A,SW,SS GW,S	Yes	L U				X ⁴
47 Original Lime Slurry Pit	Land Disposal Unit	1955 to 1968	Scrubber liquor containing calcium carbonate and other solids contaminated with chlorine and possibly mercury vapors	A,SW,SS GW,S	No	L U				X ²
48 River Road Ground-water Contamination Area	Ground-water Contamination	Unknown to Present	Ground water contaminated with chlorinated organic compounds, primarily dichlorobenzenes	GW A,SW,S,SS	No	H L		X ⁴		
49 Wastewater Holding Tanks (3)	Above-Ground Tanks	1970 to Present	Caustic wastewaters (D002)	A,SW,S,GW,SS	No	L			X	
50 Laboratory Chemical Sump	In-Ground Sump	1977 to Present	Laboratory wastewaters which may contain organic constituents	A,SW,S,GW,SS	No	L			X	
51 Caustic Evaporator Release Site	RCRA Release Site	App. 1950's to Present	12 to 50% caustic soda	S,GW A,SW,SS	Yes	H L			X ²	
52 Intermittent Blowdown Tank	Above-ground Tank	1977 to Present	Boiler blowdown wastewater	A,S,SW,GW,SS	No	L			X	

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OLIN CHEMICAL CORPORATION
EXECUTIVE SUMMARY TABLE

SWMU/AOC	TYPE OF UNIT	YEARS IN OPERATION	WASTES MANAGED	POLLUTANT MIGRATION PATHWAYS ⁶	EVIDENCE OF RELEASES	EXPOSURE POTENTIAL ¹	RECOMMENDATION			
							NEED FOR INTERIM MEASURES	RFI	NO FURTHER ACTION	FURTHER ASSESSMENT
A CPC Plant	Former Plant Site	1956 to March 1984	PCMB, TCAM, Terrazole, and raw materials/by-products associated with the production of each	S,GW SW A,SS	Yes	H M L		X		
B Mercury Cell Plant	Former Plant Site	1951/1952 to 1982	Mercury contaminated wastes including spent carbon, contaminated graphite, and contaminated structural steel	SW,S,GW A,SS	Yes	M L				X ²
C Bilbo Creek	Creek	1951 to Present	Contaminated runoff from developed portions of the facility	SW,S A,SS,GW	No	L-M L				X ⁴
D Well Sand Residue Area	Spoil Area	1951/1952 to Present	Well sand residues possibly contaminated with mercury	S,GW A,SW,SS	No	L-M L				X ⁴
E Former Underground Storage Tanks (4)	Location of Underground Storage Tanks	1952 to 1988	Diesel fuel and gasoline	A,SW S,GW,SS	No	L U				X ⁴
F Strong Brine Pond	Process Holding Pond	1952 to 1985	Strong brine possibly contaminated with mercury (D009)	S,GW A,SW,SS	No	M L				X ²

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